ABSTRACT

An object of this invention is to provide a power supply apparatus, which realizes a frequency characteristic of an open-loop transfer function having a trap point, and can deal with input fluctuation. A controller of the power supply apparatus of the invention is a circuit in which although the form of its transfer function is the same as a conventional one, values of respective coefficients are different, only a phase margin is ensured without ensuring a gain margin, and the transfer function is realized which provides a frequency range (i.e. trap point) in which a decrease in gain is remarkable and a phase is considerably delayed. Besides, in order to ensure the stability against input fluctuation, a power conversion circuit is used which converts an input voltage from an input DC power supply so as to be constant in multiplying voltage by time.